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E%onMobil

Marcol 82

ExxonMobil Specialties , Germany

Medicinal grade White Oil

Product Description

Marcol 82 is a purified mixture of liquid saturated hydrocarbons. It is a colourless, transparent oily liquid and is essentially odourless and tasteless. It is obtained petroleum through several refining stages, including an ultimate purification by catalytic hydrogenation.

Marcol 82 is manufactured to exceed the purity requirements of the Pharmacopoeias. Due to its superior chemical inertness, it demonstrates better colour and ox stability than most mineral and vegetable oils, when stored and used under controlled conditions.

ExxonMobil White Oils are produced and controlled according to the ExxonMobil Product Quality Management System, EN ISO 9000 or equivalent standard.

CAS number: 8042-47-5 EINECS number: 232-455-8

INCI name (Europe): Paraffinum Liquidum CTFA Dictionary name (USA): Mineral Oil

Applications

Marcol 82 can be used in a variety of food-contact, cosmetic and pharmaceutical applications (*), subject to the applicable laws and regulations in each country (**)

(*) To limit ingestion and aspiration hazards, Marcol 82 should not be used in nasal, oral or lip care products or as a food additive other than for food contact materia

(**) User must check compliance with applicable regulations

COSMETICS

Marcol 82 is widely used as a component of a great variety of cosmetic products:

- Emollients and moisturisers (cleansing oils and milks, body lotions and creams, suntan lotions and milk, make-up powders)
- Baby products (shampoos, baby oils, bath oils)
- Hair care products (hot oil treatments, gels, scalp pomades)
- Neutral and protective diluents for other cosmetic ingredients such as essential oils
- Other applications such as bath cubes, anti-perspirant and deodorant sticks.

Marcol 82 provides many practical advantages to the formulation specialist:

- · Excellent skin compatibility, very low irritancy and no comedogenicity
- · Very good balance between resistance to bacteria and final biodegradability, with minimal environmental impact.

PHARMACEUTICALS

Marcol 82 offers a high level of safety, thanks to its high purity (absence of toxic polycyclic aromatics, heavy metals), the complete destruction of germs in th temperature manufacturing process, and specific packaging and handling procedures.

Marcol 82 is an ingredient of pharmaceutical topical ointments and petroleum jellies. It can be used as a pelletiser aid, and in the manufacture of gelatine capsules

Regulations and Claims

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This product is registered to the requirements of:

NSF H1

This product meets or exceeds the requirements of:

FDA21 CFR 178.3620(a)

US Pharmacopeia/National Formulary Light Mineral Oil monograph

European Pharmacopoeia Light Liquid Paraffin monograph

Properties and Specifications

| Property | Standard Method(a) | Typical | Min | Max |
|-------------------------------------|--------------------|---------|------------------------------|-------|
| Appearance | Visual | | Clear and Bright | |
| Odor | OLFACTORY | | odorless or almost ordorless | |
| Color, Saybolt | ASTM D6045 | | +30 | |
| Kinematic Viscosity @ 40 C, mm2/s | ASTM D445 | | 14.5 | 17.5 |
| Kinematic Viscosity @ 100 C, mm2/s | ASTM D445 | 3.6 | | |
| Dynamic Viscosity @ 20 C, mPa.s | CALCULATED | | 27 | 37 |
| Density @ 15 C, kg/m3 | ASTM D4052 | | 845 | 858 |
| Relative Density @ 20 C/20 C | ASTM D4052 | | 0.843 | 0.85 |
| Relative Density @ 25 C/25 C | ASTM D4052 | | 0.841 | 0.85! |
| Pour Point, °C | ASTM D5950 | | | -6 |
| Flash Point, Cleveland Open Cup, °C | ASTM D92 | | 182 | |
| Refractive Index, 20 C | ASTM D1218 | | 1.464 | 1.470 |
| Paraffinic Carbons (Cp), % | AM-S 1805 | 65 | | |
| Naphthenic Carbons (Cn), % | AM-S 1805 | 35 | | |
| Aromatic Carbons (Ca), % | AM-S 1805 | 0 | | |

Note 1: Products are certified on release to meet the values specified. Actual values may deviate within the established reproducibility of the test method specified.

Note 2: For purpose of determining conformance with specification, observed or calculated values shall be rounded off to the nearest unit in the last significant dig in expressing the limiting value in accordance to the ASTM E 29 method

(a) In lieu of standard test method, alternate test methods may be used for the certification of a product property.

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.as

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06-2020

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ExxonMobil Lubricants & Specialties Europe Hermeslaan 2 1831 Machelen BELGIUM +32-2-722-2111

http://www.exxonmobil.com

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